Reviewer's report

Title: Measuring change in health status of the elderly at the population level: The transition probability model

Version: 2 Date: 15 July 2010

Reviewer: Marten Lagergren

Reviewer's report:

Most of the points raised by me in the previous review of this paper have been attended to in some way or another – most of them quite satisfactorily. There are in my opinion, however, still a few matters that remain unsettled.

Minor Essential Revisions

1. The coverage the OHIP is not clear. Obviously there must have been a change in coverage during the period, since it does not seem possible that the number of 90 years old have increased by 30% a year. In the Discussion part is mentioned that “the population of men age 90 and over grew faster than women”, but table 1 refers (now) to persons with valid Ontario Health Insurance Plan. In page 8, line 4 it says “the number (with valid OHIP plan) …may differ…. “. What kind of selection is involved here, how big is it and does it have any significance?

2. The authors seem to have misunderstood my remark concerning lack of analysis. What I was looking for was not statistical analysis, but some understanding conc. the processes underlying the result. E.g. what lies behind increasing utilisation by older and decreasing by younger persons? Indication of improved health for the younger? Utilisation of health services is known to be highly supply-induced. What has happened to supply during the period?

3. In “Trends over time in transition probabilities” (page 10) it is said that “.. probability of moving from moderate to high category for both genders 65-85 was flat over time”. In the Discussion part it is stated that there was an increasing trend in this probability for people 65 - 69 and that this was less likely to be related to the increase of chronic conditions. Which is true and where is the substantiation for the latter assertion?

Discretionary revisions

4. The tables have been much improved, but still they are very difficult to read. Maybe table 3 should be divided in two by gender? Also in my print 2006 falls outside.

5. It would have been better if trends over time in transition probabilities had been shown in a diagram or a table – perhaps after collapsing into fewer categories to make it easier to grasp the essentials.
**Level of interest:** An article of importance in its field

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests